

**Before the
Federal Communications Commission
Washington, D.C. 20554**

In the Matter of)	
)	
Inquiry Concerning the Deployment of)	
Advanced Telecommunications Capability to)	
All Americans in a Reasonable and Timely)	GN Docket No. 14-126
Fashion, and Possible Steps To Accelerate)	
Such Deployment Pursuant to Section 706 of)	
the Telecommunications Act of 1996, as)	
Amended by the Broadband Data)	
Improvement Act)	

**REPLY COMMENTS OF VERIZON ON THE
TENTH BROADBAND PROGRESS NOTICE OF INQUIRY**

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I. INTRODUCTION AND SUMMARY

The record here confirms that broadband is being deployed throughout the United States in a reasonable and timely fashion. The National Broadband Map shows that more than 99 percent of the U.S. population has access to broadband, that approximately the same percentage has access to download speeds in excess of 10 Mbps, and that approximately 85 percent of the population has access to download speeds in excess of 25 Mbps. The record also shows that a wide variety of providers continue to invest heavily to deploy new broadband technologies, such as fiber-to-the-premises, DOCSIS 3.0, 4G LTE wireless services, fixed wireless, and next-generation satellite broadband. As a result, consumers throughout the country not only have access to increasingly robust broadband, but also have an increasing array of options for broadband service.

No party disputes the fact that broadband deployment, availability, and usage have been steadily increasing or that broadband investment is robust. Several commenters nonetheless repeat arguments that this progress is insufficient, in an effort to have the Commission impose regulations that further these parties' narrow policy agendas. For example, these parties claim that the Commission should raise the threshold for what constitutes broadband, or exclude from the analysis broadband services that are billed based on usage. As Verizon and others have explained, however, adopting new requirements for defining "broadband" would unnecessarily complicate the Commission's analysis and hinder the proper assessment of broadband deployment under the statute.

Although the Commission may wish to track higher-speed services (such as those capable of 10 Mbps or more), the Commission should not artificially narrow the definition of broadband to require additional capabilities such as the ability to stream HD video to multiple users simultaneously. The current 4 Mbps/1 Mbps threshold is still meaningful to a majority of

consumers because it enables them to access virtually all content on the Internet. It is this baseline threshold for broadband that is most relevant under the statute, not whether consumers have access to high-end speed tiers that few actually use.

Nor should the Commission modify its consideration of certain broadband services based on how they are billed. The issue here is broadband deployment, and, in any event, the Commission itself has previously recognized that usage-based services benefit consumers by allowing them to pay only for what they need, and this mechanism also allows for more efficient use of scarce spectrum resources in the case of wireless services.

II. THE RECORD CONFIRMS THAT BROADBAND IS BEING DEPLOYED IN A REASONABLE AND TIMELY FASHION

As Verizon demonstrated in its initial comments, the broadband marketplace in the United States is thriving, as deployment and consumer choices continue to expand. The record overwhelmingly confirms that traditional telephone companies,¹ cable operators,² wireless providers,³ and satellite providers⁴ continue to invest substantial sums in deploying new broadband technologies. The record also confirms the findings of the National Broadband Map – that this deployment is not confined to urban or other particular demographic areas, but is

¹ See, e.g., AT&T at 4-7; Fiber to the Home Council Americas at 10-11; Verizon at 7-8.

² See, e.g., Verizon at 9-11.

³ See, e.g., CTIA at 8-9; Telecommunications Industry Association at 4-5; Competitive Carriers Association at 4; Verizon at 11-12.

⁴ See, e.g., Satellite Industry Association at 2; Hughes Network Systems at 2-3; O3b Limited at 1-2; Verizon at 15-17.

instead widespread, including to rural areas.⁵ As a result, consumers nationwide increasingly have access to broadband services, including at higher speeds and on multiple platforms.

The record also confirms that the Commission’s analysis of broadband availability should include not only wireline broadband technologies, but the full range of broadband technologies that consumers are using, including wireless and satellite broadband technologies. As CTIA notes, for example, “high-speed mobile broadband has been deployed more rapidly than any modern technology,” “is already available to the overwhelming majority of Americans,” and this massive investment has “vaulted the U.S. to the top of the international rankings when it comes to high-speed mobile wireless broadband.”⁶ Hughes Network Systems explains that it has deployed three satellites offering “speeds up to 15Mbps/2Mbps,” and “has plans to launch a new high-throughput satellite in 2016 which will increase its network capacity.”⁷ O3b – “a global broadband satellite system in medium Earth orbit (‘MEO’) that has launched a constellation of eight non-geostationary (‘NGSO’) satellites” – explains that its system “allows service providers to offer broadband service at both the Commission’s current benchmark of 4Mbps up and 1 Mbps down, and at the benchmark proffered in the NOI of 10 Mbps up and 1 Mbps down.”⁸ The record thus confirms that broadband is being deployed throughout the United States in a reasonable and timely fashion.

⁵ See, e.g., CTIA at 8-10, 11-12; Hughes Network Systems at 3; Christopher S. Yoo, Attachment at 4-7; Verizon at 8, 12-13.

⁶ CTIA at 7, 9.

⁷ Hughes Network Systems at 2-3.

⁸ O3b Limited at 1, 2.

III. THE COMMISSION SHOULD NOT ADOPT NEW CRITERIA THAT WILL UNDERMINE A PROPER ASSESSMENT OF BROADBAND DEPLOYMENT

As Verizon explained in its comments, the Commission should avoid adopting new criteria that would unnecessarily complicate the Commission's analysis and hinder the proper assessment of broadband deployment.⁹ The Commission should accordingly reject the attempts by a number of commenters to impose various burdensome broadband regulations that advance these parties' special interests.

A. Usage-Based Billing Offers Consumer Benefits.

Verizon and other wireline and wireless broadband providers have made a variety of pricing plans available, and these plans continue to evolve to provide more choices for consumers and to reflect ongoing changes in the dynamic broadband marketplace.¹⁰ Usage-based billing practices – which are commonly used in a wide variety of competitive industries – are one of the options that consumers increasingly have available to them, particularly in the case of wireless broadband services. Contrary to what some commenters claim, these practices promote broadband deployment and availability by facilitating network management and ensuring that more of the costs of providing broadband are rationally tied to the users who impose those costs. It is textbook economics that such pricing mechanisms benefit consumers and the public interest overall.¹¹

⁹ See Verizon at 27-32.

¹⁰ See AT&T at 3-4, 13-15.

¹¹ See, e.g., Jeffrey K. Mackie-Mason & Hal R. Varian, *Some FAQ's About Usage-Based Pricing*, 1 J. Elec. Pub. (1995), <http://quod.lib.umich.edu/cgi/t/text/text-idx?c=jep;view=text;rgn=main;idno=3336451.0001.134> (“Usage-based prices can be used to prioritize usage of a congested resource like a WWW server so that those who value access the most get the highest priority. Prices can also be used to allocate service classes to different uses and to recover costs of providing services. A key aspect of pricing services efficiently is that the revenues raised by the prices can be used to guide investment decisions and expand capacity.”);

Public Knowledge – whose agenda here and in other proceedings to impose heavy regulation on broadband depends on proving market failures – argues that usage-based billing may create disincentives for consumers to use broadband and for providers to invest in broadband networks, and may undermine broadband competition.¹² As an initial matter, none of these speculative concerns is relevant to the inquiry at issue here: whether broadband is currently being deployed on a reasonable and timely basis. In any case, Public Knowledge musters no evidence that these speculative concerns have come to pass, despite the increasing prevalence of usage-based billing. Indeed, the record here overwhelmingly confirms that, as usage-based billing has become more widespread, broadband usage, deployment, and competition have all increased. For example, usage-based billing is the norm for most subscribers to 4G LTE services, and this service is among the fastest-growing in U.S. history, is experiencing exploding deployment, and is intensely competitive.¹³

Public Knowledge’s arguments also run contrary to economics.¹⁴ Rather than create a disincentive to use broadband, usage-based billing promotes it by sending appropriate economic

Arthur O’Sullivan & Steven M. Sheffrin, *Economics: Principles in Action*, at 142 (Pearson Prentice Hall 2007) (“Efficient resource allocation means that economic resources – land, labor, and capital – will be used for their most valuable purposes. A market system, with its freely changing prices, ensures that resources go to the uses that consumers value most highly. A price-based system also ensures that resource use will adjust to the changing demands of consumers.”).

¹² See Public Knowledge at 4-11.

¹³ See Verizon at 11-14, 29-30; CTIA at 7-10.

¹⁴ See, e.g., Johannes M. Bauer & Steven S. Wildman, *The Economics of Usage-Based Pricing in Local Broadband Markets* (Dec. 14, 2012), http://i.nta.com/nta_com/PDFs/Wildmanreport_web.pdf (“It is true that usage-based pricing of broadband service is likely to affect consumer welfare – but not in the harmful manner suggested by its critics. To the contrary, as we show in this report, the substantial research literature on the subject of differential pricing based on usage and quality suggests that the effects of well-

signals that encourage all users to make efficient use of finite network resources, thereby improving the consumer experience for most broadband users. Moreover, usage-based pricing also provides a way for consumers who are not heavy users to keep their costs down.¹⁵ Such pricing, therefore, also encourages broadband adoption by enabling customers to pay for only the services they wish to use, without having to subsidize higher-end users.¹⁶ The Commission therefore should reject Public Knowledge’s proposal to somehow limit any Commission findings concerning the status of broadband deployment as a result of usage-based pricing arrangements.

Similarly, usage-based pricing also increases incentives to invest in broadband networks. Because such pricing helps ensure a superior broadband experience for most consumers, it better enables providers to win and retain subscribers, thereby generating the revenue necessary to make broadband investments in the first place. By contrast, rate regulation, such as through restricting usage-based pricing, would suppress investment and risk undermining the goals of Section 706. For all these reasons, former Chairman Genachowski has stated: “One tool we’ve seen is usage-based pricing, often implemented with monthly data limits. I’ve said since 2010 that, in a competitive market, usage-based pricing can be a useful tool, consistent with the goals

designed UBP plans on consumers are likely to be beneficial, as are the effects of UBP on investments in the broadband infrastructure.”).

¹⁵ See Comments of Alcatel-Lucent at 23-24, *Protecting and Promoting the Open Internet*, GN Docket Nos. 14-28 & 10-127 (FCC filed July 15, 2014) (“Alcatel-Lucent Open Internet Comments”); Comments of Verizon and Verizon Wireless, *Framework for Broadband Internet Service*, GN Docket No. 10-127 & 14-28 (FCC filed July 15, 2014) (“Verizon Open Internet Comments”) at Exhibit 1, Declaration of Michael L. Katz ¶¶ 57-61.

¹⁶ See Comments of Communications Workers of America and National Association for the Advancement of Colored People at 17, *Protecting and Promoting the Open Internet*, GN Docket No. 14-28 (FCC filed July 15, 2014); Alcatel-Lucent Open Internet Comments at 23; Comments of the National Minority Organizations at 9, *Protecting and Promoting the Open Internet*, GN Docket Nos. 14-28 & 10-127 (FCC filed July 18, 2014); Comments of the United States Telecom Association at 21, *Protecting and Promoting the Open Internet*, GN Docket Nos. 14-28 & 10-127 (FCC filed July 16, 2014); Verizon Open Internet Comments at 34.

of driving efficiency, investment, and faster and more robust network infrastructure. In general, experimentation in business models in competitive markets is something to be encouraged, and has historically benefited consumers.”¹⁷ Former FTC Chairman Leibowitz has similarly observed, “[t]here’s not a product in the world where you don’t pay for what you consume. That’s true for essential facilities and utilities like electricity. You don’t pay \$50 and turn on every light for as long as you want. It seems to me [that one way of closing the broadband gap] is letting people pay for what you use.”¹⁸

B. There Is No Need for a New Speed Benchmark at This Time.

The Commission’s inquiry seeks comment on whether to adopt a new speed benchmark.¹⁹ As Verizon and other commenters explained, there is no current reason to increase the 4 Mbps/1 Mbps threshold, as such speeds are still meaningful to consumers.²⁰ The Commission’s own analysis shows that the adoption rate for services at or above the benchmark level (even where faster services are available) is 40.4 percent, and where the higher speeds (*i.e.*, at least 6 Mbps/1.5 Mbps) are available, the adoption rate is only 27.6 percent for those high-

¹⁷ Chairman Julius Genachowski, FCC, *Winning the Global Bandwidth Race: Opportunities and Challenges for the U.S. Broadband Economy*, Remarks on Broadband at VOX Media, Washington, D.C. (Sept. 25, 2012), <http://www.fcc.gov/document/chairman-genachowski-remarks-broadband-vox-media>.

¹⁸ Tony Romm, *Leibowitz Says Metering Could Help Broadband Growth*, *Politico’s Morning Tech* (June 16, 2011), <http://dyn.politico.com/members/forums/thread.cfm?catid=24&subcatid=78&threadid=5569178>.

¹⁹ *Inquiry Concerning the Deployment of Advanced Telecommunications Capability to All Americans in a Reasonable and Timely Fashion, and Possible Steps To Accelerate Such Deployment Pursuant to Section 706 of the Telecommunications Act of 1996, as Amended by the Broadband Data Improvement Act*, Tenth Broadband Progress Notice of Inquiry ¶¶ 6, 15-17, GN Docket No. 14-126, FCC 14-113 (rel. Aug. 5, 2014) (“*Notice of Inquiry*”).

²⁰ See Verizon at 30; AT&T at 7-15; Competitive Carriers Association at 16-17; NCTA at 5-7. See also Fiber to the Home Council Americas at 12-18 (advocating for the abandonment of a speed benchmark).

speed services.²¹ These data reflect that consumers continue to find that services at the existing 4 Mbps/1 Mbps threshold meet their needs for broadband services, and a higher benchmark would serve no purpose in accurately assessing the availability of broadband.²² Indeed, even at 4 Mbps, consumers can access virtually all Internet content.

Several commenters, including Public Knowledge and Netflix, nonetheless argue that a higher benchmark is needed, suggesting that 25 Mbps is appropriate because it is the supposed speed that enables three simultaneous HD video streams with enough leftover capacity for other applications.²³ These arguments miss the point. The primary purpose of the Commission's benchmark is to evaluate whether consumers are receiving a baseline level of broadband, not to determine how many consumers can use top-tier broadband service.²⁴ And while some consumers may desire speeds greater than 4 Mbps/1 Mbps, the evidence demonstrates that this baseline level is still popular and meaningful to consumers as a whole. Even at 10 Mbps download speed, the Commission's own estimates confirm that this level of service would support a user watching a high-definition movie online (requiring around 7 Mbps) with capacity

²¹ See *Inquiry Concerning the Deployment of Advanced Telecommunications Capability to All Americans in a Reasonable and Timely Fashion, and Possible Steps To Accelerate Such Deployment Pursuant to Section 706 of the Telecommunications Act of 1996, as Amended by the Broadband Data Improvement Act*, Eighth Broadband Progress Report, 27 FCC Rcd 10342, ¶ 97, Table 17 (2012) (“*Eighth Broadband Progress Report*”).

²² See FCC, *Broadband Speed Guide*, <http://www.fcc.gov/guides/broadband-speed-guide> (noting that among popular online activities, only “HD-quality streaming movie or university lecture,” “HD video conference and telelearning,” and “[t]wo-way online gaming in HD” require a minimum download speed of 4 Mbps).

²³ See Public Knowledge at 16-18; Netflix at 3-6.

²⁴ See *Eighth Broadband Progress Report* ¶ 18 (“In each of the reports the Commission has conducted under section 706, it has relied on a speed benchmark for determining whether a service satisfies [the statutory definition of ‘advanced telecommunications capability’]”).

still available to support two or three others simultaneously involved in other online activities.²⁵ Thus under no reasonable scenario would it be appropriate to raise the threshold more than four-fold, to 25 Mbps as Public Knowledge and Netflix recommend.

The goal of the Section 706 inquiry is to determine whether broadband is being deployed in a “reasonable” fashion, not to assess whether some broadband usage level is available throughout the United States that allows everyone to stream high-definition Internet video at once. While it may well make sense for the Commission to monitor progress with respect to such higher speed services, for the sake of consistency and to ensure meaningful comparisons over time, the Commission should maintain a relatively stable benchmark for defining broadband, even if the Commission also sees a benefit in tracking the availability and adoption of higher-speed services.

IV. CONCLUSION

The Commission should confirm that broadband services are being deployed in a reasonable and timely fashion in the overwhelming majority of the country, and the Commission should continue to pursue policies that encourage broadband investment and innovation.

²⁵ See *Notice of Inquiry*, ¶ 12, Table 2.

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